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UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY

FOREST INSECT INVESTIGATIONS

MEMORANDUM CONCERNING INSECT CONDITIONS

CLEVELAND NATIONAL FOREST

OCTOBER, 1930

by

K. A. SALMAN
Bureau of Entomology

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USDA Forest
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University of California
Berkeley, California
November 6, 1930

U. S. GOVERNMENT PRINTING OFFICE: 1928 J 76133

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Examinations were made of several areas in the Cleveland National Forest during the period October 24-28, 1930, in order to gain some information concerning the present condition and trend of the insect populations. The Corte Madera Valley, Laguna Recreational Area and privately-owned tracts of land north of the town of Julian were visited in the Descanso Ranger District, while in the Palomar Ranger District Dyche Valley and surrounding timbered areas were inspected.

Descanso Ranger District

Corte Madera Valley. A report has already been prepared concerning this area, and it is hoped that provision can be made to continue insect control work in the area. A careful cruise was made, and it was found that the epidemic infestation of 1929 had given way to an endemic infestation in 1930. If control work is continued as a maintenance project, it is probable that a greater reduction in the losses will be attained, and extermination of the western pine beetle may be possible.

Laguna Recreational Area. The timber stand in this area is largely Jeffrey pine of all age classes, although the immature age classes are predominant and form thickets. The site is poor and growth is slow. The stand has a great value, however, because of the recreational uses to which the area has been adapted, and park conditions exist. The present infestation, so far as could be determined, is almost entirely one caused by flat-headed borers. The insects are not vigorous in their attack, but follow their attack on one tree in one season by attacks on surrounding trees in succeeding seasons, so that a group of dead poles is the result. Control measures were carried on by the Forest Service over a portion of the area in 1929, and it appears feasible to attempt protection of the more valuable recreational portions of the timbered area by carrying on insect control operations in those portions and in a protecting belt of timber surrounding them.

Julian. An examination of some timber on privately-owned land north of Julian revealed epidemic conditions in trees of Age Classes One and Two. One group of 42 trees was examined on the Anna Lou Farm of Arthur Juch and Son, and several other groups involving fewer trees were noticed in surrounding timbered lands. The western pine beetle was the insect causing the injury, and in some trees it appeared to have produced a successful summer and winter brood this past season. In other cases two broods were produced in one tree. Some trees were found in which only the upper half of the trunk had been attacked; and in other trees, although the beetles had been successful in killing them, practically no brood had been produced and the attacking adults had been "pitched out".

The infestation possesses some unusual features, such as the selection of immature trees for attack and the fact that a great increase in intensity of infestation followed a season of heavier-than-normal precipitation. As the infestation is on private land and the timber is of little value, it is unlikely that control measures will be undertaken by the owners. It is possible, however, that the conditions existing in the privately-owned lands may be followed by similar infestations in National Forest lands within the same general area. Accordingly it would be well to watch developments and take measures to control the infestation should it encroach on valuable areas within the National Forest.

Palomar Ranger District

In company with District Ranger Longacre, and examination was made of the infestation reported by him in Dyche Valley and on Morgan Mountain. In 1928 a fire burned out a portion of the stand in Dyche Valley and evidently scorched some of the timber, providing material in which it was possible for the western pine beetle to breed. The beetles emerging from this material apparently spread to unscorched timber outside the fire area, and have continued their intensive attack until at the present time an area of approximately three-fourths of a section has suffered a loss of about 65 per cent of the stand. The infestation appears to be spreading, and groups of trees attacked by the 1930 summer and winter broods of beetles are to be found in Mill Valley and in the vicinity of the heavily-infested area mentioned above. The infestation is clearly of an epidemic type and losses are heavy. The values represented by the timber, however, are low, for the greater part of the privately owned land is used for grazing, and in the National Forest the timber values are the only ones at stake. It is doubtful if any action to control the epidemic would be taken by the private owners; and unless the entire area could be subjected to control measures and the situation followed up in succeeding seasons, it would be unwise for the Forest Service toattempt control.

The north slope in the vicinity of the recreational area near Palomar is, according to Ranger Longacre, relatively free from insect attack. On Morgan Mountain, however, there are evidences that insect losses are increasing, for groups of two and three trees per group were attacked and killed in 1930. Control operations were carried on by the Forest Service on Morgan Mountain in 1929; but in view of the fact that the area is relatively inaccessible, and that the timber has no present value greater than its actual worth, it is doubtful if control is warranted. If plans have been made to utilize this timber in the future as part of a recreational project or some other purpose that would enhance its value, control might be justified at this time, providing it was practiced over the entire area of a natural entomological unit.

Photo 1. Infestation of Dendroctonus brevicomis Lec. in Coulter pine, Dyche Valley, Cleveland National Forest, October 27, 1930 (Panchr.photo #7414). Shows heavy 1930 summer and winter losses in stand predominantly of immature age classes; Beauty Mt. fire in 1928 burned approximately to line; spread of infestation since 1928 has been rapid. (K.A. Salman photo)

Photo 2. Infestation of Dendroctonus brevicomis Lec. in Coulter pine near Julian, Cal., Cleveland Nat. Forest; the group of 42 immature infested trees photograph lighter in color than normal trees (panchr. photo #7416; Oct. 27, 1930; K.A. Salman).